Algebra 1 Name ANSWER KEY ID: 1

2.1-2.1 One & Two Step Equations

Date _____ Period ____

Solve each equation.

1) $\frac{x}{12} = 22$

$12\left(\frac{x}{12}\right) = (22)\cdot 12$

$x = 264$

2) $-33 = x - 16$

$+16 \quad +16$

$-17 = x$

3) $-19 = n + (-8)$

$-19 = n - 8$

$+8 \quad +8$

$-11 = n$

4) $17 = n - (-4)$

$17 = n + 4$

$-4 \quad -4$

$13 = n$

5) $11 = \frac{p}{21}$

$21\cdot(11) = \left(\frac{p}{21}\right)\cdot 21$

$231 = p$

6) $24 - r = -2$

$-24 \quad -24$

$-1(-r) = (-26)\cdot -1$

$r = 26$

7) $-20k = 320$

$-20 \quad -20$

$k = -16$

8) $-9 = -17 + m$

$+17 \quad +17$

$8 = m$

9) $-5 + \frac{p}{9} = -6$

$+5 \quad +5$

$9\left(\frac{p}{9}\right) = (-1)9$ $p = -9$

10) $-5 + \frac{x}{10} = -3$

$+5 \quad +5$

$10\left(\frac{x}{10}\right) = (2)10$

$x = 20$

11) $-129 = 10x + 1$

$-1 \quad -1$

$\frac{-130}{10} = \frac{10x}{10}$ $x = -13$

12) $2 = \left(\frac{1+b}{2}\right)2$

$4 = 1 + b$

$-1 \quad -1$

$3 = b$ $b = 3$

13) $-5(-5+m) = -35$

$25 - 5m = -35$

$-25 \quad -25$

$-5m = -50$

$\frac{-5m}{-5} = \frac{-50}{-5}$

$m = 10$

14) $-4(5+n) = 52$

$-20 - 4n = 52$

$+20 \quad +20$

$-4n = 72$

$\frac{-4n}{-4} = \frac{72}{-4}$

$n = -18$

15) $-3 = \left(\frac{-8+n}{3}\right)\cdot 3$

$-9 = -8 + n$

$+8 \quad +8$

$-1 = n$

16) $1 = \left(\frac{-1+r}{6}\right)\cdot 6$

$6 = -1 + r$

$+1 \quad +1$

$7 = r$

"What do you call a horse that can't lose a race?"

Simplify the following expressions. Cross out the letter that matches your answer.
The remaining letters will allow you to figure out the joke.

1. $2(5x - 1) + 3x$ = $10x - 2 + 3x = 13x - 2$

2. $6x + 3(2x + 7)$ = $6x + 6x + 21 = 12x + 21$

3. $7 - 1(3x - 4)$ = $7 - 3x + 4 = -3x + 11$

4. $10 - 4(6 - x) + 5x$ = $10 - 24 + 4x + 5x = 9x - 14$

5. $6(x - 4) + 10(2x + 3)$ = $6x - 24 + 20x + 30 = 26x + 6$

6. $-3(6x - 5) + 2x - 1(-11x + 8)$ = $-18x + 15 + 2x + 11x - 8 = -5x + 7$

7. $2(8x - 13) - 8(2x - 4) + 6$ = $16x - 26 - 16x + 32 + 6 = 0x + 12 = 12$

8. $5(-2x + 7) - 1(3x + 22)$ = $-10x + 35 - 3x - 22 = -13x + 13$

9. $4(9x - 1) + 5(3x + 7) - 6(x - 8)$ = $36x - 4 + 15x + 35 - 6x + 48 = 45x + 79$

A ~~$12x + 21$~~ 2	S $10x - 7$	T ~~$-13x + 13$~~ 8	H $4x - 7$
E $9x - 20$	C ~~$26x + 6$~~ 5	U ~~$13x - 2$~~ 1	R $11x + 1$
L ~~12~~ 7	B $24x - 8$	E $4x - 8$	M ~~$9x - 14$~~ 4
O ~~$-3x + 11$~~ 3	T $37x - 2$	N ~~$45x + 79$~~ 9	W ~~$-5x + 7$~~ 6

Joke #12

Simplifying: Distributing and Collecting Like Terms

SHERBET